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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,472	05/10/2005	Coen Adrianus Verschuren	NL 021139	4998

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BRIARCLIFF MANOR, NY 10510

EXAMINER

SHEN, KEZHEN

ART UNIT

PAPER NUMBER

2627

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/534,472

**Applicant(s)**

VERSCHUREN ET AL.

**Examiner**

Kezhen Shen

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claims 3 and 9 are objected to because of the following informalities: Regarding claims 3 and 9, the term [moulded] should be spelled --molded--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Oonuki et al. US 6,424,601 B1.

Regarding claim 1, Oonuki et al. teach a domain expansion storage medium in which a magnetic wall is displaced to thereby enlarge a magnetic domain in a readout layer so as to reproduce an information indicated by a magnetic domain in a storage layer (4, 5 and 6 of Fig. 2B, Col 3 Line 25 - Col 4 Line 5), wherein a substrate of said storage medium has a locally modified surface structure or said storage layer has a locally modified magnetic property (6 of Fig. 2B, Col 3 Line 25 – Col 4 Line 5), arranged to define a predetermined shape of said magnetic domain (Fig. 8, Col 15 Lines 37-40), said predetermined shape having a curvature adapted to a predetermined thermal reading profile (Fig. 6, Col 4 Lines 6-39 and Col 13 Lines 52-64).

Regarding claim 2, Oonuki et al. teach a storage medium according to claim 1, wherein said magnetic domain has a crescent shape reversed with respect to a rotation direction of said storage medium, the curvature of the concave edge of said crescent shape substantially matching with the facing curvature of said predetermined thermal reading profile.

Regarding claim 4, Oonuki et al. teach a storage medium according to claim 1, wherein said storage medium is a MAMMOS disc or a DWDD disc (Col 13 Lines 1-18).

Regarding claim 5, the limitations of the method of manufacturing a domain expansion storage medium have been analyzed and rejected with respect to the domain expansion storage medium as set forth above in claim 1.

Regarding claim 6, the limitations of the method of manufacturing a domain expansion storage medium have been analyzed and rejected with respect to the domain expansion storage medium as set forth above in claim 2.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oonuki et al. US 6,424,601 B1. as applied to claims 1 and 5 above, and further in view of Katsumura US 2002/0057641 A1.

Regarding claim 3, Oonuki et al. fail to teach medium wherein said substrate has an injection moulded format.

However, Katsumura teaches the substrate to have an injection moulded format ([0030] – [0031]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the storage medium as taught by Oonuki et al. with the teachings of creating the substrate with an injection moulded format as taught by Katsumura as a whole for the benefit of mass producing the optical discs ([0031]).

Regarding claim 7, Oonuki et al. fail to teach a method wherein the surface structure of said substrate is processed in said processing step.

However, Katsumura teaches the processing of the surface structure of the substrate (Fig. 3, [0026] - [0027]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the storage medium as taught by Oonuki et al. with the teachings of using an electron beam to process the substrate as taught by Katsumura as a whole for the benefit of writing data on the substrate.

Regarding claim 8, Oonuki et al. fail to teach a method wherein said substrate is processed by an electron beam recording method or a recording method adapted to induce a localized difference in said magnetic properties.

However, Katsumura teaches the use of an electron beam recording method (Fig. 3, [0026] - [0027]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the storage medium as taught by Oonuki et al. with the teachings of using an electron beam to process the substrate as taught by Katsumura as a whole for the benefit of writing data on the substrate.

Regarding claim 9, Oonuki et al. fail to teach a method wherein said substrate is processed by using a stamper obtained from an injection moulded master substrate.

However, Katsumura teaches the use of stamper, obtained from an injection moulded master, to process the substrate ([0030] – [0031]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the storage medium as taught by Oonuki et al. with the teachings of using a stamper made from an injection moulded master to process the substrate as taught by Katsumura as a whole for the benefit of mass producing the optical discs ([0031]).

Regarding claim 10, Oonuki et al. fail to teach a method wherein said master substrate is mastered by an e-beam recording method.

However, Katsumura teaches the use of an electron beam to master the substrate (Fig. 3, [0026] - [0027]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the storage medium as taught by Oonuki et al. with the teachings of using an electron beam to master the substrate as taught by Katsumura as a whole for the benefit of writing data on the substrate.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kezhen Shen whose telephone number is (571) 270-1815. The examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kezhen Shen/  
Examiner, Art Unit 2627

/Joseph H. Feild/  
Supervisory Patent Examiner, Art  
Unit 2627